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Hints on Grape Culture.—XXI.

WE have now brought the vine to the beginning of the third year, with the arms formed half their length. We omitted in our last to allude to the alternate vines directed to be grown with trunks three feet high to form an upper course of arms. The manner of forming the arms on these, the reader will no doubt understand, is precisely as directed in our last. The arms on both courses are formed alike. Some explanation may not be out of place here. Let us suppose the posts of the trellis to be full six feet out of the ground, as they should be. It is common to use six wires for a trellis of this height; but five answer the purpose just as well, and a considerable item of expense is saved; indeed, for a double course of arms, such as we are now describing, five wires are even better than six. Place the first or lowest wire fifteen inches from the ground, and the others fourteen inches and a quarter apart. These distances will cover a trellis six feet high. If the posts are higher, the distances may be increased a little.

The upper course of arms is to be formed on the *third* wire. The trellis will thus be equally divided between the upper and lower courses. We have already stated that the arms on the upper course are formed just like those on the lower course; and the treatment in other respects will be precisely alike, except otherwise specially noted. It may, and probably will happen, that all the arms on the upper course can not be formed as soon as those on the lower course. However this should prove to be in individual cases, we repeat here that no arms should be formed until good stout canes have been obtained.

Having carried the young vine along to the beginning of the third year, with the arms half formed, let us pursue *seriatim* the treatment of the season. The vines having been pruned and placed in the position indicated in last month's

issue, the next thing in order is plowing. This must be done as previously directed, not, however, going so deep, except in the middle of the rows. Every precaution must be taken to injure the roots as little as possible; the less they are disturbed the stronger the vines will grow, and stout wood is now our principal object. The ground not reached by the plow should be forked up. If strawberries are grown between the rows, they should be forked over. The whole surface of the vineyard, in short, must be broken up. No runners should be allowed to form on the strawberries. If root crops are put in, they should only occupy the middle of the row, and be highly cultivated. The horse hoe must be used from time to time, to kill weeds and keep the soil open and mellow. It can hardly be used too often. If the ground in the first instance was not thoroughly prepared, it may have, at the time of plowing, a top dressing of old manure, composted with muck and ashes; the Delaware, indeed, may be manured liberally every year with advantage, for it requires higher treatment than any other of our native vines. At the end of the third year we shall give some special directions for manuring the vineyard.

Let us next look to the vine. The arms are to remain bent until the new shoots have grown three inches; they must then be tied to the bottom wire. The shoots must all be trained upright except the two end ones, near *d* and *e*, (in preceding figure,) which are to form the continuation of the arms; they must be grown at an acute angle, or somewhat horizontal, tying them from time to time as they increase in growth. About the middle of June, trim off neatly and closely the piece of dead wood at the end of the arm. It should be cut close to the new shoot, and at an angle of about forty-five degrees. It will then soon heal over. About the first of September, bend these arm shoots still nearer to the wire; say within three or four inches. Then pinch out the end. The laterals must be pinched in as before directed. This will constitute the treatment of these two shoots for the season. The other shoots must be trained upright, just as directed for growing a cane during the first year, pinching out the laterals as before stated. About the middle of August pinch out the ends. This will help to ripen and increase the size of the wood and fruit. One, or it may be, two of the end buds will break; cut off all but the lowest, and pinch this in during the first week of September, and then let them all grow undisturbed.

By referring to the last figure, there will be seen beneath the letters *i* and *k* (below the wire) two buds which have not been directed to be rubbed out. These are to be grown unchecked during the season, except that the laterals are to be pinched in as usual. They may be tied close together as they grow. The reasons for allowing these two shoots to grow unchecked will be fully explained hereafter, though they may be found briefly indicated in an article we published about a dozen years ago. We purpose, however, to elaborate this point a little by-and-by.

The reader has doubtless been waiting anxiously to hear something about the

fruit. Each shoot will probably set two bunches of fruit; some of them more; but one bunch each will be as many as the vine should bear this season, or ten bunches in all, except in the case of some vine that has shown great vigor, when a few additional bunches will serve to check its exuberance. An experienced eye will readily judge of the ability of a vine to bear a given quantity of fruit; but we are writing mainly for the inexperienced, and prefer to keep them on the safe side. As we have directed no arms to be formed except of stout wood, it will be perfectly safe to leave at least one bunch to each shoot. With this quantity the reader ought to be satisfied for the present.

Having brought the vines to the end of the growing season, we leave them till our next.

ORCHARD CULTURE.

BY WILLIAM BACON, RICHMOND, MASS.

A few years since, a person, for the sake of employment, took an agency from a reliable nursery for the sale of their trees. He was wholly inexperienced in tree culture; still, on visiting farmers and others for the sale of his wares, he informed them, with as much assurance as though relating a fact based on his personal experience, that their previous failures in orchard planting were the result of mistaken culture. This was probably to some extent correct; but he laid down a course of culture for them to pursue, which, if carried out, would, in a few years, give them large trees in full bearing. His plan was this: for several successive years after the trees were set, use the cultivator and grow buckwheat. Perhaps this was a judicious system to adopt in some cases. We do not say but it may have been; but, so far as our observation extended, it did not amount to much, and soon went out of fashion.

Orchard culture, like that of other crops, must be brought to meet circumstances. Different soils, locations, and climates call for varying processes, so that few general rules can be adopted, to carry out with assurances of success. Of these, we consider a preparation of soil before transplanting, as of the greatest importance. Some soils are naturally deep and open. Where this is not the case, they should be made so before the tree is placed in them; for no tree will flourish for any length of time in a thin or compact soil. It is labor lost to place them there, either in expectation that they will flourish in the ground as it is, or in the hope that after culture will remedy the deficiencies. The last can not be done, for every inch of soil needs a thorough pulverization, which can not be effected under the roots when they have once been put in place.

In planting trees of any kind, especially fruit trees, we would say, then, prepare the land before hand; that is, if the soil is not naturally deep, make it so

by deep tillage; if not fine, reduce it, no matter how fine. If not so dry that water will not settle and stand under the trees, drain it; if it requires manure, apply it according to the necessity of the case in previous tillage; in short, bring the land into that high state of cultivation, which is necessary to the successful growth of any other crop. Then trees may be put into it, if they are healthy trees, well taken up and well replanted, with a fair prospect of success.

As it respects their after culture, the good sense of the cultivator ought to be sufficient to give him direction. If he wishes a rapid growth, it will be necessary to feed high, and perhaps to continue cultivation with plowed crops. South and West, where the winters are mild, or in a portion of the country where there can scarcely be said to be any winter, this course may answer well, but in New England, and, indeed, all regions where the winters are severe, we question whether keeping the ground in plowed crops or high feeding is best. It is a well-established fact, we believe, that plowed lands freeze deeper and are more subject to repeated freezings and thawings, than those in grass. Consequently, the roots of the trees are more exposed to the vicissitudes these changes bring. Even in plowed grounds, however, this objection may be removed by littering to secure the tree from the extremes of these changes; still, in our Northern climate, if the ground is well prepared, we can see more advantages than objections in foregoing the use of the plow after the trees are set; and if the ground is stocked, we have found no particular objection. Truly, the trees may not grow so fast under such circumstances. Rapid growth in a cold climate is not desirable; it is the harbinger of early decay; for who is not aware that the texture of quick growing trees is much more loose and spongy, open to the action of frosts, than those of slower and more compact growth? Where trees are highly fed, in such a climate, it is no unusual thing for the bark to crack off by freezing and thawing, and even for the trees to split.

Where trees are overfed, the branches too often grow so late in autumn that it is impossible for the wood to ripen, and winter cuts it down as though it were an herbaceous plant. Not so with the trees that nature plants and that grow under her maturing and protecting care. She gives them a needful supply of food to answer the purposes of a healthful growth, and causes them to ripen their wood in full preparation for frosts and storms. Her teachings are worthy of the careful consideration of those who would be successful like her.

Again, nature, when she plants trees, does not disturb their roots with plow or spade. In her forests; she keeps the ground around them in a light, porous condition by the top dressing she gives them. In autumn the leaves of forest trees fall from their branches to cover and protect the roots from the inclement season that awaits them, and in the coming spring these leaves commence to decay to keep the earth light beneath them, so that the tender roots may push around to gather food and give stability to the tree. They also form a fine, healthy manure, which of itself furnishes the aliment of future tree growth.

How far it is expedient to follow nature, others must decide to suit themselves. We have imitated her in furnishing the elements of growth to a few fruit trees, and are so well pleased with the result, that for our own practice, we consider it the best. In other localities, however, it may not be so. Cultivators must decide this matter for themselves. An experiment with a few trees can do no harm, and it will settle the question.

So, then, we have come to the conclusion that the true way for us to raise healthy and long-lived fruit trees is first to prepare the land thoroughly by draining if necessary, and then by a deep and very thorough tillage before the trees are set; then obtain good trees, and see that they are well set; and after the trees are once located in this well-prepared soil, we would keep it in its fine, light condition by as frequent top dressings as were necessary to secure the result. We have seen land so dressed that was kept as light as when first released from the labors of the plow. Who has not seen fruit trees in locations where the soil was top dressed by the frequent deposits brought on by rains, and admired their thriftiness, though neither plow nor spade had disturbed the earth around them since they were set? Such trees are vigorous enough in growth, and abundant bearers. The largest and one of the oldest pear trees we ever saw, stands in a place where it takes the wash of the highway, and bears heavily.

For this top dressing, other manures than those usually employed for plowed crops may safely be used, thereby making the thing more economical to the farm than when corn or other crops are to be raised. Composts are better than yard or stable manures for fruit trees, and there is no decaying substance on the farm that can not safely be employed in the compost heap. Leaves and muck may form the basis of the heap, and all the odds and ends of the premises may be thrown in to hasten their decay and produce their immediate value. Ashes, whether leached or not, slops, brine, every thing almost thrown upon the heap, prevents waste and makes the compound more valuable.

[There is always something fresh in the views of Mr. Bacon, looking to a practical application. There ought to be a general concurrence of opinion in regard to the importance of a thorough preparation of the soil previous to planting an orchard. It can not be as well done after the trees are set, and is very apt to be entirely omitted in consequence of the additional trouble. The cultivation of orchards has occupied a good deal of attention lately. We have no doubt at all as to the utility of cultivating young orchards; we think it ought always to be done. That it is not always satisfactory (though it is very generally) is owing to the fact that the roots of the young trees are needlessly cut to pieces by the plow. This need not, and should not be done. We are also of opinion that old orchards are benefited by cultivation, especially in cases where the original preparation of the soil was not thoroughly done. There can be little doubt, also, that cultivation is the best, cheapest, and quickest mode of renovating an old and worn-out

orchard. A thoroughly prepared orchard, after it has become well established, may be put down to grass, and kept in good condition by proper top dressings. It is a great mistake to grow corn in an orchard; root crops may be grown judiciously. There can be no doubt that grass protects the roots of trees; but it may well be doubted whether the roots of the apple and other hardy trees require such protection. The damage done in winter is not to the roots, but to the tops. Where the wood is not ripened, top and bottom will suffer more or less. These are merely hints which our readers may take up and follow out. The remarks of Mr. Bacon in regard to high feeding deserve consideration; but it is a rare thing to see this in an orchard. Where the growth is gross the wood generally ripens imperfectly, and is apt to be winter killed; it is, moreover, liable to other casualties. Our readers all know how tender we are of the roots of plants; still we must not make too strict an application of the fact that Nature uses neither spade nor plow; for in the field of Nature, what is true of trees in this respect, is also true of all plants; yet we know we can not get along without these useful implements. Nature teaches us many useful lessons, which we can not disregard without a penalty; yet it has been wisely ordained that man shall labor to perfect the fruits which Nature has so bountifully provided. Mr. Bacon understands all this as well as we do. We have dwelt on the subject for a moment for the benefit of those indolent souls who wrest the argument of Nature to excuse their wretched neglect of all the means providentially placed within their reach. If these men will only prepare their orchards, plant their trees, and top dress as Mr. Bacon directs, we will cheerfully consent that their orchards shall remain in grass for the next ten years.—Ed.]

INTERIOR VIEWS, No. 5.—EXOTIC GRAPERIES.

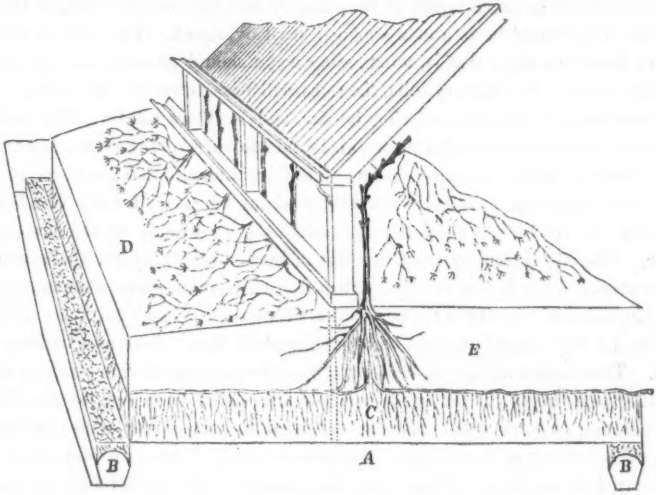
BY FOX MEADOW.

(*Continued from page* 510.)

Now examine and study scientifically, if you please, the difference between a border composed of the materials advised, and the materials by which a border is made *impervious* to air and water. We all know, or ought to know, that every drop of water contains a very surprising amount of electrical fluid, and this fluid seems to be the life, perhaps, of every thing; at any rate, it is taken up by the roots of plants into their systems, and is one of God's means in Nature of perpetuating creation. Plants can not live without this element; and as an evidence of its vast importance to all vegetable life, we see its most wonderful invigorating effects through the thunder storm; for, during such periods, plants grow with more than double their ordinary rapidity. The influence this electrical element exerts on the roots of the vine is very great, and in more respects than one. Our business is to study this influence, and in so doing we shall find that it is of the

utmost importance that each spongiole the vine may possess be supplied properly, constantly, and proportionally, (as far as our knowledge can possibly direct us in the latter,) with this element in question. This leads our thoughts to the very base of the question, which is the base of the vine border. Perhaps there is as much wrong in the formation of this "base" as there is in the materials of which the borders are composed. Elements by which man lives, and adds to his comforts and enjoyments through life, are oftentimes the very means by which he loses his life. This electrical fluid, so essential through every particle of the soil, to sustain health and fruitfulness in the vine, when massed in the hollow cavities of the border, is as much injury to the vine, by its action on the roots, as the element of water would be to a man confined in it overhead. The base to all vine borders should be dry; that is, no standing water should be at or near the base of any vine border. In ordinary soils, the rains will pass down and through it. Any such base is good enough for a vine border, and is all we ask for. The sizes of the border being determined, a drain can be laid to *surround* the base, and twelve inches *below* it, having a proper outlet. This drain should have connection with the external atmosphere, and this is *all* the draining necessary for any vine border. (See cut.) It will be now seen that our compost goes directly on the base of the border. There is no one foot nor two feet of broken stones, oyster shells, nor any other material, for it is of more injury than use, more money wasted than common sense applied, and results in the production of more diseases than has ever been cured by all the scientific quacks who have applied their many and various nostrums. Thorough drainage, as it is termed, at the bottom of vine borders, which consists of, (as many of our readers know full well,) from one to two feet of broken stones, or some other material intended to answer the same purpose, if arranged according to the "highest possible authority," have no connection with the external atmosphere. These two atmospheres — the internal and external — are at two distinct temperatures, one colder, the other warmer. Now in the summer time, when the external atmosphere is hot and dry, the internal atmosphere which surrounds this drainage in question, is much colder, consequently a condensation takes place, and water is produced among these stones and on the bottom. Now the moment the border becomes dry, or the moment a sufficiency of moisture is not presented to the absorbing roots, the latter become attracted through the law of affinity, to where moisture is; and where is this under the circumstances? Why, at the bottom of your border! in your *air chamber!* Here you will find the roots dangling among the stones, like the roots of air plants in a moist orchidaceous house! The same cause which makes grass grow near a drain, and be green when all that which surrounds it is dry and burnt up during hot weather, is the same law which causes the outside of the ice-pitcher to be dripping with wet in our thirsty days of July and August; and, hence, the very element necessary to be in every particle of soil to ensure health, becomes, through its injudicious application, the sole cause of disease and death! A glimpse at our cut will give

the reader a truthful representation of the vine's roots in compost with such a so-called drainage. The nature of these papers will not admit of our speaking as fully on many points as we could desire; and as it is, we have encroached too much on the valuable space of the Journal. The month of November being now advanced, is a good time to remedy the evils in borders; and to all who are dissatisfied with the results of their vine-growing, should this arise from disease in the vines, imperfect setting or fecundation, shank, mildew, cracking of the berries, poorness of color, imperfectly ripened wood, half crops, with a host of other



things too numerous to mention, we say, take up the vines. Start at the outside of the border, and throw out a trench to the bottom of it, about four feet wide, and carefully lift all the roots that can be found; and if any of our readers should happen to find any *in* the border, and they are not on the bottom or out of the border in some foreign country, we hope they will be kind enough to tell us through this Journal.

In taking up the roots, see that they do not get dry. Sprinkle them constantly with water, and cover them, as far as practicable, with some material or other during the operation. If the borders have been well dosed with manure, and all the little other "tiny tid bits," add plenty of good sharp sand, and don't be afraid of it. See to its being thoroughly mixed. This done, the vines can be replanted, laying the roots on the surface of the ground, and placing on them about four inches of the soil. In replanting, make as many *angles* in the roots as is possible, or that your patience will admit of, for by so doing you will increase the number of new young roots. Peg them down on the even surface of the border, and

then cover them up as soon as possible, and the work is done. Done, did we say? Oh, no! the work is not done! What remains? is the question. The *feeding of the vine.* Now lay on the top of this border (if it is of our compost,) just as much rotten dung as you please, all the special fertilizers you please—bone, lime, and everything else you think proper. We do not care how many *tons* of it you use, but put all on the *top* of the border. This is Nature's way of making borders. All her stimulants are placed on the *top* of the ground. Trace all through the vegetable world, and where do you find *air chambers* under trees, and *rotting matter* among roots? Let us study Nature's never-deviating laws, and then we shall find

> "The age that is passing to rise and proclaim
> To the age that is coming 'laws' *always the same.*"

[The printer in making this up prevents us from making a few remarks. They will be in place hereafter.—Ed.]

THE LIBRARY.—II.

BY L. S. B., BROOKDALE FARM, MAINE.

A small library requires the same care as a large one. By this I mean that the small collection of books forming the private library of any rural resident, should be kept in as nice order, and the classification and arrangement of the volumes as much in accordance with correct rules, as a larger private, or even a public library. Detached volumes from a set should never be found in a straggling position; works upon general history should not occupy a place by the side of works upon stock breeding; and every volume, or set of works, should have its assigned place upon the shelves, so that, if necessary, they could be procured without a light. There should be the same harmony and arrangement to the different classes of works, or those on different subjects, in a small case as in larger ones, and the former, like a small building, can have the same lines of beauty, and the same attractiveness as those which belong to a more spacious and expensive edifice. It should also be remembered, that if the books are in a room especially devoted to them, light and air must be afforded them in abundance; but in rooms occupied as a library and sitting-room together, this precaution is not so necessary. It has been found that books kept in dark and unventilated apartments, are very liable to mould, and in a few years become very much soiled. Light and air are as assential to books as to plants, and the library and green-house require very much the same treatment. Books also, like tools, are kept in better condition if in daily use.

I must turn back a leaf here, and say another word about cases. In some

private libraries, and in nearly all public ones where books are used considerably, the shelves of the cases are covered with leather, to prevent the wearing of the volumes. This is a good plan; and I would suggest, that where it is to be followed in a private library, the leather used should be Russia calf, such as is employed in binding those heavy works that require a durable outside. It can be procured of any dealer in bookbinder's stock, at prices varying from two to five dollars per side, of the size of a large calf skin. Besides preventing the wearing of the volumes, it is also a sure preventive of moths or worms, on account of its peculiar smell, which is offensive to the moths, but causes a room to have quite an agreeable odor. If library shelves are not covered with this material, half a dozen volumes bound in the leather and placed through the library, would be almost as effectual, and better, I am told by bookbinders, than shelves made of the wood of White Cedar, before recommended.

Now that I have gone back to *cases*, perhaps I might as well say a few words more in regard to the interior fixtures and furniture of the library room. Downing, in his "Country Houses," (p. 404,) says: "The library should be quiet and comparatively grave in color; some shade of fawn or neutral tint for the walls, the furniture of dark oak, or wood like the book cases, and the carpet selected so as to accord with the severe and quiet tone of the walls and furniture. Leather or morocco makes the best and most appropriate covers for the seats of chairs and other furniture for a library." The forms and styles of furniture for the library are, as we said in our previous article, of every variety of finish, and can be obtained at greater or less cost, according to the fancy or means of the purchaser. Library tables, to have a distinctive character corresponding with the design of the room, should be heavy and massive, inlaid at the top with morocco or cloth, for the purpose of affording a smooth surface for writing. Tables provided with drawers are more expensive, but are quite desirable. A secretary, such as is figured in Downing's "Country Houses," would not only be a very useful piece of library furniture, but likewise ornamental; and besides making a writing-table with all the necessary drawers and fixtures, the shelves above could be appropriated to choice volumes often read, or works more frequently referred to in writing. Library chairs, to correspond with the other furniture, should be heavy and solid, leather covered, well stuffed, and with an easy curve to the back; in describing the library furniture for Gothic villas, Downing speaks of separate cases to contain each department in the library, which may extend all around the room, or as many as are required to contain the collection. He says: "The spaces below afford excellent closets for pamphlets and manuscripts, and the busts of distinguished men in different departments of letters may be so placed along the top, as to designate to what particular class of books the case directly below is allotted." The plan is similar to that spoken of in our previous article, although no mention was made of the very elegant and appropriate method of designating the different classes or divisions of works

in the library by placing above each case a bust or portrait of a representative man in that particular department. It is certainly a very chaste and ornamental design.

Arthur Young, in his "Survey of Lincolnshire," as quoted by Loudon, (Enc. of Ag., p. 1155, London ed., 1835,) in speaking of the management of the estate of Sir Joseph Banks, gives an account of the library rooms in his mansion, which possess many advantages and conveniences over rooms of a similar character that have been described in our own country. In one small room there were 156 drawers, containing papers and documents of every kind, relating to the affairs of the estate. If an inquiry was made concerning a man, an inclosure, a separate farm, drainage, or any operation, in a moment a mass of information was on hand, as a list of the contents of each drawer was kept in the desk, so that every article could be had when wanted. He also describes a small wooden case, which, when opened, formed a little library for agricultural hand books, and when closed could be carried in a carriage to any part of the estate. It also had apartments for stationery, small blank books, etc., and formed a convenient writing-desk. If our country houses had a room appropriated for the purpose of a library, and also as a sort of cabinet for specimens in natural history, such as could be collected upon any farm, what an interesting feature it would be in the lives of our country residents. How much happier, more contented, and more useful would be the lives of those living with such influences and associations around them, than if no attention were bestowed upon books, study, and the cultivation of the mind and heart.

I had hoped, in this number, to reach that part of my subject treating of books themselves, their arrangement and classification; but it must be deferred to my next article.

[There are comparatively few persons now who are not willing to concede the value that justly attaches to a collection of good books. Farmers and gardeners, as a general thing, have failed to realize the importance of such books, not only as aids to their business in life, but as instrumentalities in developing and educating the minds of their children, and fitting them for usefulness in the world. The subject is one which has often occupied our thoughts; but our correspondent is abundantly able to handle it, and for the present we leave it to him. We wish to say, however, in regard to the furniture and appointments of the library, that while they should be subdued in tone, they should not be dark, heavy, and somber, an error often committed; above all, avoid placing the library room in some dark corner of the house, where the sun never shines. Where it could be done, we would place it so as to receive the early morning sun, and so catch the inspiration of the day from its rising rays.—Ed.]

WARDIAN CASES JUST THE THINGS.

BY AN ENTHUSIAST.

Mr. Editor,—I am so delighted with a new case, combining the Wardian and Waltonian plans, that I send you the result. The frame is about five feet long, by thirty-two inches wide; as wide as will enter a common door. The woodwork, of black walnut, is six inches deep, and lined with zinc up to the sash, which fits tightly down to the frame. The glass is 30x32, two plates on a side, and one on each end. The roof slants up from all sides at an angle of about 145°, and meets a smaller plate which covers the center. The sash is strong, and of black walnut. A dais one third the width of the case runs lengthwise through the centre as high as the wood work; that is, six inches. This also is covered with zinc. The bottom of the case under this dais has a hole six inches in diameter, over which a small tin boiler fits into a rim. The rim is to prevent any leakage upon the floor. It is soldered on around the hole. The boiler holds about a gallon, and is connected by a tube with the outside. All this is concealed by the dais, except a small hole, to which I attach a bent tunnel when necessary to connect with the tube, and thus fill the boiler. Remove the funnel, and you only observe a small orifice. The whole may then be warmed by a lamp set under the boiler. This will not be necessary, except on very cold nights or very damp days. The case is raised on turned legs as high as the window seat, so as to obtain full light. Hooks are attached to the roof frame, on which small shelves or hanging baskets may be suspended. The bottom is filled with sawdust on each side the dais, into which the pots are plunged.

The case stands so that each end is exposed to a south window. A west window also looks directly at one end. Those three windows give an abundance of light and sun. The sun will raise the temperature quickly to 80°. Without artificial heat, the thermometer suspended within seldom sinks below 50°, except damp days. Each end is a door, by which the heat and moisture may be modified. I will tell you what plants the case contains, and then the effect on each. A Calathea zebrina; several Fuchsias, among which Madame Cornelison, Sir Colin Campbell, Rose of Castile, Schiller, Lord Elcho, Governor General, do best; Caladium tricolor; Begonias Splendida Argenta, Roi Leopold, Madame Alward, Madame Stuart Low, Queen of England, Manicata, Humboldtii, Coy's Victoria, Splendida, Ricinafolia, etc.; Cissus discolor; Diefenbachia picta; Farfugium grande; Heliotropes; Camellias in variety; Salvia splendens; winter flowering Carnations, Cinerarias, Stocks, Pelargoniums, etc.

The Begonias are plunged where the sun will not often touch them; so with other plants that love the shade. At the ends, where I can easily air them, and they will receive more light, are placed the Pelargoniums, Camellias, Fuchsias. The case affords a rare chance for propagating by cuttings, for germinating tropi-

cal seeds, etc. The Fuchsias needed acclimating; but all the other plants took to the case readily. The Fuchsias are now in fine order. Madame C. is in gorgeous bloom. Cuttings apt to damp off, placed by one of the doors, and not often supplied with water, work well. I apply water mostly to the plunging medium, the sawdust. The sun lifts it, and after lining the glass with moisture, feeds the leaves gently, and distributes the water by a natural plan. However, I attend to it that water lovers shall have their full feast; and others tinctured with hydrophobia can set near the door, and not receive even the average supply. Verbenas will not thrive in such a case with even extra care. The India Rubber Plant adds a rich green to the collection, and by cutting back can be kept within bounds. Cannas also thrive well. The capacity of such a case is beyond expectations; but the plants must be arranged so that the leaves shall not touch each other more than can be avoided. A skillful arrangement will enable one to stow in a very numerous collection.

The beauty of the case can not be exaggerated. Its refreshing colors in winter are delightful. You can thus raise Camellias and other plants, and bloom them, while in a common sitting room they lose their buds. The case is a little world by itself. Up goes the moisture to meet the sun; but, stopped by the glass, comes down in a miniature rain storm. Dust, that chokes the delicate creatures in an open room, is here debarred. If kept wholly closed, no water need be put in the case oftener than once a month; but this is not advisable. The case had *better* be aired; then a little *too* much moisture may work irreparable mischief. I prefer to let the case at times lose quite a large portion of its water, and then refresh; but *never* have a draft running through. All decaying leaves should be at once removed, as they are both poisonous and unclean. One rotting Begonia leaf may spread contagion to several.

The cost of the case was about thirty-five dollars. One with smaller panes of glass, having always the length of the case about double the width, could be built for a very much less sum, and be more convenient in most rooms. Mine is set on heavy castors, but can not be readily moved for fear of strain on the glass; a smaller case would obviate this difficulty where it is desired to move the case. It would detract from the beauty, but add to the safety, to have each pane of glass half the width, and more sash. Of course the old plan of planting permanently in these cases is not advisable. Better by far for taste and convenience set in pots. Begonia leaves root readily set on a swinging shelf. Winter flowering bulbs do finely. Ferns fairly revel in the moist purity.

The beauty and freshness of foliage are not the least of the recommendations, but above all things the neatness attendant on confining our room plants to an inclosure is most desirable. The care of their culture is much lessened. No one who loves plants, and realizes their refining power in a family, should be without such a case. It would furnish a minister with illustrations from Nature, and almost make a poet of any one. There is no other way of visiting the tropics, and yet

sit still in one's study. Brazil, Mexico, the Cape, and India here mingle their fragrance and combine their loveliness. It lifts one's thoughts as well as his heart to the Deviser and Source of Beauty as well as Truth.

"For the dear God who made us,
He made and loveth all."

[Your style would have discovered your *status*, if you had not told us; for no one but a delighted enthusiast could write in such a happy vein. We wish there were more like you who would put their pens to paper, and lay open to others the sources of their enjoyment. The leaven of selfishness is so thoroughly permeating, that many men, even after they have thrown off the "old man" and put on the "new," still remain unaccountably selfish even in their pleasures. We love a man who has a soul big enough to share his joys with his fellow-man. We believe, however, that there is something in a true love of flowers that neutralizes the selfishness of man's nature; and hence "An Enthusiast," and others like him, when they discover some new source of pleasure, straightway invite their neighbors to share it with them, while it is still fresh. In this spirit "An Enthusiast" has written of his Waltonian case, and we thank him for it in behalf of our readers. They can not fail to be benefited by it. Those who grow parlor plants, and have not a Waltonian case, should not fail to get one, however small, if it be only to grow a few ferns in. They will find it a source of pleasure as varied as it is inexhaustible. The information given by "An Enthusiast" will enable them to construct a very good one, if they can not purchase one ready made, which is not easy, except in a few of our large cities. We will state here, for the information of our readers, and in answer to inquiries, that Mr. C. B. Miller, of New York, keeps on hand a variety of styles and sizes of the Waltonian case. There are some features about the one described above which we like very much, and we can imagine how very beautiful it must look filled with such a choice assortment of plants. The advantages of the Waltonian case are well described; the beautiful effect of the plants grown in it can not well be exaggerated. Do by all means let us hear from you again soon.—Ed.]

REJUVENATING OLD HOUSES.—No. V.

BY MYRON B. BENTON.

If the kitchen garden be then removed, a little additional space is reclaimed near the house, where it is wanted, for a yard or lawn; a spot of perhaps a quarter of an acre. This has been, so long as remaining a garden, kept free from trees, for the benefit of the vegetables. Let it still remain so now, for the benefit of those more important living things, the farmer's family.

Around how few houses in the country do we see a smooth, unencumbered grass-plot. It is fortunate if one can discover, outside the yard, in any of the farmer's fields, that

"Sunny spot of greenery,"

whose cool, peaceful face the eye so longs to repose upon. With so many wide fields, it would be ridiculous for any one to deprive himself of this luxury close to his dwelling. But it is not, probably, as a general thing, a spirit of economy which does this. It comes more from a lack of skill in the proper distribution of the various departments; in precisely the same way that the inconvenient arrangements of the interior of the house have been made. The house and grounds were not intentionally so arranged, but, like Topsy, "they growed." In fact, a thousand and one things were wanted "handy by," and only by extraordinary good management could this result have been avoided. But a lawn, of almost any size desired, would be no loss in point of economy; for it would yield as much grass, and more, than if in the field. Thus it would give a double crop, as did that of which our greatest poet sings,

"One harvest from thy field
Homeward brought the oxen strong;
A second crop thine acres yield,
Which I gather in a song."

This "second crop" we can gather in a perpetual song, which will sing itself in our hearts, though we may not translate it into words.

The largest portion of this piece of reserved ground should be kept a smooth, unbroken turf; a broad place without a tree, shrub, or flower-bed. This should lie in full view before those rooms which are occupied every day, whether kitchen or parlor. A few trees should be near the house for a partial shade, and some shrubbery; but all thick, close plantations of the kind, should be at some distance. A dense, tangled wood is fine in its place; only it should not be near the house. The lawn should be inclosed by a belt of trees and shrubbery of various kinds, but not in a stiff, regular form. The top line should conform to Hogarth's "line of beauty," now high, and now so low that perhaps a single furtive glance can be obtained within by the passer-by in the street. It should be a slight peep only—no more; for seclusion is one of the chief objects to be desired in such places. If open to the broad view of the highway, nine-tenths of its charm would be gone. For this reason the screen, inclosing, should be mostly dense; but it should shade off into the lawn gradually, by shrubs and trees standing less closely together, and occasionally one standing by itself, with room to unfold all its fair proportions without restraint.

A few flower-beds may be made on the border; and the invariable rule should be, in this matter, to lay out only such a number as can be carefully attended to. A neglected flower-garden is one of the most unsightly of objects.

As a general rule, where but little can be expended upon ornamental or pleasure grounds, nearly all fanciful adornments should be eschewed; as rustic-work, vases, etc. As few walks and paths should be cut out of the turf as need be. The clean grass will serve all purposes for walking in most cases, if it is kept smoothly mown all the season. The farmer can not generally shave his lawn as often as he does his beard, as is the case in very extensive parks, but he ought to mow it a number of times in the course of the season.

As has been said, the out-buildings should not be concealed. The wagon-shed should be nearest to the house, and the barns a little further off. The hog-pens should be farthest removed of all. Having them close to the house for the convenience of feeding, is nothing short of perpetrating a nuisance. With regard to the architecture of these buildings, there is a bad taste becoming more and more prevalent. The attempt is to make them appear *fine*. There is too much ornamental work and hard finish, and they are painted in too delicate hues. Such buildings should have no fine, elaborate work about them. Their architecture should be noticeable rather for a substantial, durable, and even rough construction. If painted, they should be in the most quiet, unpretending, and least delicate shades. Think of a pink barn, with all the lower story mottled and streaked with manure-stains! In form, their picturesqueness should consist rather in bold outlines, than any fine work in small proportions; with overhanging roof, from beneath which the rafters project into sight.

In the desultory suggestions, which this article concludes, it is not claimed that any thing complete has been attained. The subject is very wide in the thoughts brought to mind, and offers much room for study. If any hints have been given which shall be of use to any one in renovating an old place, I shall be well satisfied.

[We have been much interested in Mr. Benton's suggestions. The subject is by no means exhausted, and we hope he will continue it in his moments of leisure. That his remarks have been a source of pleasure and profit to many of our readers, we have not the least doubt. With the hope that he will continue the subject, and give us some illustrations of old houses improved, we leave it where it is.—Ed.]

REPORT ON GRAPES FOR 1862.

BY PRATIQUER.

Although this has been a great fruit year in the Highlands, grape-growers have been very much disappointed in the quality of their fruit, and many of my friends have disposed of their crops at ruinous prices, ranging from two and a half to five cents per pound for Isabella Grapes, which is the leading variety in cultivation. The

immediate cause for this low price may be traced to the want of ripeness in the fruit, and, consequently, to the exceeding bad quality of that sent to market. As good fruit always commands a good price in your city, we must not suppose that it was the redundancy alone which depressed the market. There are a few of us living in the Mountains who consider ourselves knowing ones. *We* "take the HORTICULTURIST, and read it;" *we* raise ripe fruit of good quality, and *we* get a good price for it, even in such a plentiful year as that of 1862. How then, methinks we hear some one ask, do you do it? This is what we are about to make known. *We cultivate and ripen the wood, upon which our future ripe and good fruit is to grow*, and we follow as closely as we can, and as near as our clever neighbors will let us, the instructions laid down in your journal, as to pruning, pinching, &c. It is true, we are pointed at as book-learned grape-growers, who will not profit by experience. Experience of what? why, of those who will not consider these facts, but who follow Nature in the cultivation of the grape. Now Nature lets her vines grow wild, run great lengths, get into tall trees, and sometimes, though not very often, produces ripe, luscious fruit. Then Nature gets all the glory, and art, science, and skill are nowhere. Our answer to Friend Experience this year is, "We told you so;" and this will be, we think, the answer for many years to come. The principle of cultivating the vine so as to cause the sap to mature the fruit near the root, keeping the vine, a fruitful vine, away from Nature's tall trees; producing ripe, luscious fruit, and a good deal of it, is a triumph of skill over Nature, that even Nature's own advocates must sooner or later acknowledge; and if they profit by it, will show their good sense. With good culture, the Isabella grape may be ripened year after year, and no longer be a by-word or a reproach to its cultivators.

I began this with a view of making you a "model report" on grapes for the locality of Fishkill, Dutchess County, New York, and shall take them in the order of their ripening.

1st. Hartford Prolific. 1st leaf, May 7; flower, June 10; fruit color, Augt. 7 to 16; ripe, Sept. 10. Some branches hung on the vines to Nov. 5th, and were shrivelled and dried partially, like raisins. They sold readily at 12 cents per pound, and were complimented by dealers as the first Isabellas in market.

2d. Creveling, a much better variety than No. 1. A young plant bore one fine bunch, ripe September 15th. This grape has great merits, and will doubtless become a favorite when better known.

3d. Early Northern Muscadine. Ripe, 15th September; leaf, 12th May; flower, 15th June; color, August 27. Hung on to 2d November, but dropped when touched; not otherwise.

4th. Clinton. Leaf, May 7; flower, June 3; fruit set, June 10; color, August 22; ripe, September 16; picked, November 2; and was then in fine condition for wine making, and by many admired for eating.

5th. Isabella. Leaf, May 12; flower, June 14; fruit set, June 20 to 25; color,

September 1; ripe enough to market, 17th; fully ripe, 30th. One vine colored 20th August, but did not ripen. On examination it was found to be half girdled by mice at the surface of the ground. These berries were very large and showy, but not sweet, having the flavor peculiar to girdled grapes. Isabella grapes are often marketed before maturity. Unripe grapes on the 17th September sold for 8 cents per pound; those that were fully ripe on and after the 1st October brought 9 cents at wholesale. Common fruit was then selling at about 4 cents. An offer of 15 cents was made for the balance of the crop on 27th October, which closed the season. Truly, "the Isabella can not yet be dispensed with."

6th. Catawba. Leaf, May 14; flower, June 17; mildew and rot, July 20; color, Sept. 2; and on 22d some few berries were ripe, but a portion remained unripe to Nov. 2d. Some fine bunches were selected and exhibited at the Newburgh Bay Horticultural Society's exhibition on 24th Sept. After the rot commenced, I strewed the vines, fruit, and leaves with a mixture of one part sulphur and twenty parts air-slacked lime, which appeared to arrest it.

7th. Perkins. Leaf, 15th May; flower, 12th June; color, Aug. 26; ripe, Sept. 23. Drops from bunch; has a strong flavor (odor?) admired by many, and would sell well in small quantities at 12 cents per pound. Handsome fruit of a grayish pink, buttery, with a tough, thin skin.

8th. Concord. Sets scattering, but produces beautiful, large bunches. Leaf, May 15; flower, June 20; color, Aug. 22; ripe, Sept. 26. Hangs well to 1st Nov., and does not then drop. This is among our fine grapes, worthy of cultivation. Sells for 12 cents in market. It is not a favorite after the Isabella ripens.

9th. Hyde's Eliza. Leaf, May 16; flower, June 19; color, Aug. 27; ripe, Sept. 26. Sweet, vinous, hangs well; keeps well; will dry as a raisin; desirable. For three successive years I have found it good. It is not of the Isabella variety, as reported by the Fruit Grower's Society of Eastern Pennsylvania.

10th. Rebecca. Leaf, May 16; flower, June 25; color, Aug. 25; ripe, Oct. 16. Has the taste of a foreign grape, though less sweet. Is a feeble grower. One vine will generally suffice. Casts its leaves early.

11th. To Kalon. Leaf, May 15; flower, June 21; mildew, July 10; fruit rots badly; color, Sept. 6; ripe, with inferior bunches, Oct. 5th. Not desirable.

12th. Allen's Hybrid. This is the first season of fruiting, and, to my great disgust, was covered with mildew like the foreign gooseberry. Some few berries that escaped were ripe and sweet Sept. 26. I hope this is an isolated case. The appearance of the mildewed fruit is the same as that of the Chasselas and Gutedel, which we cultivated 25 years since in the open air.

13th. Garrigues, a very poor imitation of the Isabella, ripens later, and is worthless to the cultivator.

14th. American Hamburgh; similar to the last described, only a little more so. This must be the grape which a celebrated cultivator describes as having for

its pulp a "hard lump which passes undigested into the stomach, and which has performed its mission," if it ever had any. Worthless.

15th. Diana. A good grape, if it only would ripen. Leaf, May 12; flower, June 18; has some rotten berries; color, Aug. 27; on Nov. 2 there were some sweet and palatable berries, but not ripe.

16th. Anna. Leaf, May 15; flower, June 21; rot, July 12; color, Sept. 26; not ripe, Nov. 5, though other varieties in the same ground, with the same treatment, ripened well. This must be classed among the most worthless.

17th. Delaware, though last, not least. You may say I have "kept the good wine (vine) until now." This is the most unexceptionable grape, as it always ripens, and has a delicious, sweet, vinous, agreeable flavor. Leaf, May 13; flower, June 20; color, Aug. 27; ripe, Sept. 20. Hangs well; holds to the bunch, and is always good with me, as long as it lasts, which is not long. We send none to market, feeling that the laborer is worthy of his hire, and that he who grows good grapes gains great glory, and is himself worthy to glean and consume the product.

[Still another model report, for which you have our thanks. You are unquestionably right in saying that well-grown grapes of good quality will always bring a good price. We have never known it to be otherwise. We feel a good deal flattered by the knowledge that you attribute your success to following our suggestions. We have been similarly complimented from a number of other sources; and we may say here, that he who faithfully works out our "Hints," can not fail to achieve success in grape culture. Your account of the Hartford hanging on is the most favorable we have yet heard. The fruit does not drop so much on old vines as it does on young ones. The Creveling, we think, is destined to become a popular early grape. It is a fruit of much better quality than the Hartford. In regard to the Isabella, fully one half of all sent to market are unripe. The same remark will hold good of many other kinds of grapes. We hope Allen's Hybrid will do better with you hereafter, for it is really a fine fruit. How far it will be subject to mildew can not be certainly known yet; but we hope for the best. Anna, we are sorry to perceive, has been wayward and coquettish with you. We regret this, because we are very much disinclined to believe any ill of one bearing such a pretty name. Bear with and coax her yet a little while. Truly you have "kept the good wine until now." Whether mentioned first or last, the Delaware is sure to assert its pre-eminence. You may depend upon the Delaware when every other grape fails you. But it seems that it does not last long with you; somehow or other, it is just so with us. Model reports and Delaware grapes are always in order.—Ed.]

LANDSCAPE GARDENING AS APPLIED TO RURAL CEMETERIES.

BY VIATOR, CLINTON, N. Y.

In the application of the rules of Landscape Gardening to public and private grounds in this country, we have as yet but in few instances arrived to the highest degree of excellence. The subject is comparatively new with us, no general attention having been given to it, until within a few years past. Even now there are but few that seem to comprehend the subject, and its practical application. Although there are many that lay claim to considerable progress, and some who have given us fine examples of what may be done in this department of art, yet we think but few can excel who have not the genius to be close copyists of Nature. Whatever may be thought of the propriety of remarking freely upon the manner in which individuals arrange and work their private grounds, we think it is no breach of politeness or good breeding to notice, in a general way, any essential errors that may appear, as this may be of advantage to those who are preparing to do work of this kind upon their own grounds, and also, in some instances, may call the attention of those more directly interested to errors that may have escaped their observation, in time, so that a remedy may be applied. Especially may this reason hold good in works of a public character. In the well-penned criticisms of the HORTICULTURIST upon the work in the Central Park, we have a good example of what has been done to benefit that work, and to furnish valuable hints to others.

Public works are expected to be the best of their kind. In most instances the amount of money to be expended is larger than can usually be furnished by individuals, and in proportion as the influence of public works is necessarily greater than those of a more private character, so, when they are essentially defective in design or working, or not in good taste, they are fair objects for criticism. All works of this kind should be of such a character as will tend to elevate the standard of public taste wherever undertaken. Without claiming any special fitness to point out errors, or what is needed to the perfection of such grounds, I propose, in a brief and desultory way, to make some suggestions and to give some of the impressions made upon my own mind in a late visit to some of the cemeteries of New England.

My first visit was to the Old and New Cemeteries of the city of Hartford. They are both laid out with straight roads and walks running through them, with others crossing at right angles, marking the grounds into rectangular sections. In the old grounds the lots are graded very unequally. Many of them are fenced in with high iron and wooden fences, with very contracted spaces between them. We noticed many of the lots which were considerably raised above the natural land of the adjoining ground, and some that were entirely neglected and the grass uncut.

While there are many fine monuments and some grounds well improved, a large amount of money has been expended in monuments, stones, and fencing, which does not materially add to the character, interest, or beauty of the place. Being planted with trees and shrubs, there is in this respect some improvement upon the old style of country church yards; but in other respects they have many characteristics in common with them. What is called the New ground is very similar in character to the Old, with perhaps some improvement in planting and grading, and in the spaces between the lots, and in occasionally rounding off of corners where the roads meet or cross each other. The same prevailing general character is exhibited in both. A serious objection to both is, that they are located in the thickly inhabited portion of the city.

At Mount Auburn, near Boston, we found a cemetery constructed after the more modern ideas of what such grounds should be, and, if I am right, one of the first attempts in this country, on so large a scale, to apply the modern rules of Landscape Gardening to Rural Cemeteries. We have here what we should anticipate, a close adherence to curved lines. What else should we expect? A Bostonian is brought up and educated in crooked and curved streets; from early youth to manhood and old age he walks through these streets; their beautiful curves and intricate windings are so impressed upon his mind that all stiff and straight lines are at once discarded and thrown aside whenever he attempts any thing in the way of rural adorning. Does not this furnish us with a satisfactory reason for the beautiful lines we see about the fine residences in the vicinity of Boston? these being here the rule rather than the exception, as we find them elsewhere.

In this respect no fault can be found with the roads and walks at Mount Auburn. The general arrangement of these appear to be convenient, and furnish easy access to every part of the ground, and are mostly well-constructed and neatly kept.

Of the expensive and beautiful monuments, the costly tombs, granite inclosures of lots, its lovely dell, the tower, the chapel and its statuary, it is not necessary to speak. All who visit here can not but be struck with the profusion exhibited with which money has been invested to perfect these works of art. But with so much that is costly and beautiful, there are other features that are in contrast to this. The high iron fences and hedges walling in small lots, and these placed thickly together, with scarcely any space between them, soon become tiresome and repulsive to the visitor, and he feels that they do not properly belong here. The trees, many of them, are far from being good specimens of their kind, and too many large trees are permitted to grow upon the lots. In looking down from the tower, it has the appearance of a thickly wooded forest. This is highly objectionable, as it prevents the free circulation of the air and the drying effect of the sun. We can not but think that an extensive thinning of trees and a judicious grouping of those suffered to remain, would greatly improve not only the appearance, but healthfulness of these grounds.

In grading, there seems to be no general rule followed, but each owner is permitted to create such a surface as pleases him, without regard to the natural surface of the ground. Where the grades conform nearly to this surface, they appear much less artificial and are more satisfactory. We well know the difficulty of inducing most persons to adopt curved surface lines rather than flat and level ones, of employing, if any, low inclosures for their lots, and of planting sparingly of large trees; yet we think that in works of this kind the rules should require a strict observance of uniform and appropriate practice in these respects.

These are among the more prominent imperfections, as it seemed to me, to be found at Mount Auburn, and I was gratified the next day, in visiting the Forest Hill Cemetery at Roxbury, to find in some of these particulars a decided improvement. This cemetery exhibits more nearly the true idea of what belongs to a rural cemetery, and contains about the same quantity of land as that at Mount Auburn.

The style of trees and planting are better; the spaces between the lots, and the margins along the roads and walks, are more ample. The lots are much less walled in with high inclosures and hedges, giving it a more open and less crowded appearance at present, though we think even here, as the trees become larger, a much less number will be required than are now planted in some parts of the ground, to produce a satisfactory result. Although there is not here that prodigal display of costly monuments and other structures, which in their exuberance we feel to be almost oppressive at Mount Auburn, there are many well improved lots and fine monuments, and some that will compare favorably with those found there. We noticed one that particularly pleased us; a brown stone Gothic monument upon a lot kept in the best manner, situated upon a point where several roads meet, with a high rock covered with the English Ivy as a back ground, that seemed as appropriate and in as good taste as any single one we have seen.

The lake and its islands, and its outlet, are pleasing features in this cemetery. The grass upon the lots and borders is kept closely cut, and a great quantity of flowers are planted along the well-kept borders of the walks. This last feature appears to have been carried to excess in some portions of the ground, making a too gaudy display for the purposes to which the place is appropriated. The study should be, in all adornments of such grounds, to produce variety, and only admit things that are simple, chaste, and appropriate, and in good keeping with the use to which the ground is dedicated. It has been well said, "The grave should be surrounded by every thing that might inspire tenderness and veneration for the dead, or that might win the living to virtue." The surface grading and arrangement of walks; the form and material of monuments and other structures; the planting of a variety of trees, shrubs, and flowers; the keeping and working of the ground, should all be so directed that nothing shall appear that is offensive to good taste.

The frequent repetition of the same idea as an iron fence, the same style of

monument, the continuous planting of the same kind of trees, shrubs, and flowers at equal distances along the walks, and the grading of lots in flat surfaces, soon cease to interest the visitor; and we expect, at no very distant time, to see those having these and like works in charge, working their grounds and grading them to correspond nearly with the natural surface of the ground, and planting them with good specimens of single trees of suitable kinds, or in groups, before offering their lots for sale; or of so controlling the improvements and working as to remedy the evils alluded to, and other objectionable practices that are now too frequently brought to the notice of those who visit them.

[We are much pleased to have our attention called to this subject, especially by one so able as "Viator" to do it justice. The application of the rules of Landscape Art to Rural Cemeteries has not hitherto received the attention it deserves; and one reason would seem to be a prevalent idea that these rules are unsuited for any such application. This is a great mistake; for there is a peculiar propriety in their application to this purpose. This, we are glad to know, is beginning to be more generally understood, and the taste and knowledge of the landscape artist is now brought into requisition in adorning these "cities of the dead." The criticisms of "Viator" are in excellent taste. Having had our attention called to the subject, we propose to follow it up, unless "Viator" will consent to continue what he has so well begun.—Ed.]

THE APPLE OR ORANGE-SHAPED QUINCE.

(*See Frontispiece.*)

BY THE EDITOR.

"Where are the Quinsins?" asked the little son of El Medico, in our May number, after having examined the pictures of a bound volume of the Horticulturist. We promised you a picture of one, Frank, and here it is. As you are a dear little fellow, we looked about for a great big one for you, and have had it nicely colored. We hope you and all our readers will like it very much. It was grown by Mr. Cyrus Knapp, of Hackensack, N. J., who had a number of others like it. He ought to feel very proud of growing such fine specimens. But we must tell you, Frank, that all Quinces do not grow as large as this one. We hope, however, that you will grow some quite as large one of these days. The Quince, Frank, belongs to the genus *Cydonia*. There are several kinds, such as the Apple-shaped Quince, the Portugal Quince, the Chinese Quince, Rea's Seedling, and others, the best and largest of these being Rea's Seedling, which is probably

the kind your father saw at the Fair. Then there is the Japan Quince, grown for the sake of its brilliant flowers; it is one of our best ornamental shrubs, and sometimes bears a fruit that will pucker your mouth all up. The kind that we have selected for you is the apple-shaped Quince, which grows on a tree some eight to ten feet high. Some people think it grows best on low, damp soils; but that is all nonsense, Frank, and you must get no such ideas in your head. It grows best on a rich, mellow, well-drained soil. In damp and wet places it becomes hard, gritty, and astringent, whereas on a well-drained soil it grows large and mellow. Some people grow it like a bush, letting suckers come up and grow as they will, and never taking the least pains to prune it. Such people are dreadful slovenly, Frank. You must not be so, with your Quinces, or any thing else. Your father must buy you one of Rea's Seedling, and prepare a piece of ground to put it in, digging it deep, and enriching it with some old manure and plenty of muck. After that is done, and the hole ready, spread out the roots carefully, and work in some nice fine soil all around them. Trim off all the branches within two feet of the ground, and as the tree grows, cut out such branches as interfere with each other. If you will only take a little pains in this way at the beginning, you will in time have a nice, round-headed tree, loaded with beautiful golden fruit. After the tree is once established, it will require little or no pruning. If you want large Quinces, Frank, you must break off a good many when they are quite small. You will get quite as many pounds as though you left all on, with this advantage, that the fruit will not only be large, but very much better. You must look out for the borer, however, and punch him out if he gets in, or he will spoil all your hopes of big quinces.

Quinces are not eaten like Apples and Pears, Frank; they are made into jellies and preserves, which are very nice when well made, with the flavor of the quince preserved. They are profitable to raise for market, always bringing a good price. But we will tell you more about Quinces at another time, and give you some more pictures. So good-by, Frank, for the present.

REMARKS UPON THE DAHLIA.

BY A. VEITCH, NEW HAVEN, CONN.

Those who have been acquainted with the Dahlia for the last twenty-five years can not but be struck with the marvellous improvement it has undergone during that period. A little previous to that time they were what may be considered in the middle stage of their progress from the single and not very inviting "Wildings of Nature," to the highly improved condition now so strikingly manifested. To bring about this change, the labor of florists has been immense; and it is interesting to remember, what a degree of intelligence some of those

in the vanguard exhibited in laying down a standard to which they would ultimately reach, at a time, too, when such flowers as we now possess were but dimly foreshadowed by living forms, and had existence only in the dreams of enthusiasts; many of whom, as a matter of course, were sneered at by the "Jasper Standstills" of the day. Fastidious florists may have differed somewhat as to some of the particulars which they considered indispensable to the making up of a perfect flower; but there need be little difference now in regard to the leading points, as these are no longer subjects of speculation only, but are abundantly manifested in those varieties which occupy the post of honor in every good collection, and every exhibitor's stand.

It may seem of little importance what sort of footstalk a flower should have; whether long or short, stiff or slender; but, upon consideration, more depends upon this for showing a flower to advantage, than at first sight may appear. There are some good flowers with peduncles so short that they are hidden by the foliage, which greatly detracts from their bearing and show in the garden. It therefore seems a principle that the footstalks be long enough, and not longer, than to carry the flowers clear of the foliage, and stiff enough to permit them only to lean a little to one side, as in this position they can be seen to greater advantage than when standing upright or nestling among the leaves. The new Dahlia, Emma Cheney, may be mentioned as affording a good illustration of what we mean, and which, by-the-way, is greatly at fault in this respect. I had almost said the flowers of that variety are sessile; the footstalks are so short, however, as to necessitate the curious in many instances to turn aside the leaves before they can get a look of the flowers at all.

As to the flower itself, the point of greatest importance, and the one to which all the others are merely accessory, is that of form. Without this, color is but a poor recommendation, and size of small value. A flower may be all that can be desired in size, and adorned with the richest colors; but if the petals are coarse and ill shaped, and loosely or irregularly put together, its recommendations to notice would be perfectly unintelligible. On the other hand, if well formed, it can claim a place, although possessed of all other properties in a subordinate degree. "Two thirds of a ball when looked at sidewise" is the form most approved by those who have bestowed the greatest attention upon the subject. Some of the best varieties, when well grown, come nearly up to this requirement. The Duke of Roxburgh and Andrew Dodds are so near that little more can be desired. Take well-grown flowers of those varieties, and subject them to the most critical examination, the astonishment will be how they came to be so perfect. In size they are quite respectable, and in color the best in their classes. If a flower of either is cut into two equal parts, one half laid flat upon a sheet of paper, and a line drawn around it with a pencil, touching the extreme points of the petals in the operation, the result will be a nearly perfect segment of a circle. Were it entirely perfect, the highest point would be reached as regards form. When

subjecting flowers to such an ordeal as this, their defects become very apparent, and their relative merits equally so. Some are too high on the shoulder, others too low; some too low in the centre, or hollow in the eye, as it is sometimes called; while others have petals so incapable of holding their form, that they get out of order, fall back, and go to decay before the centre petals are fully expanded. That is a perfect flower only, the first blown petals of which maintain their position to the last, or until those of the disc are fully developed. Carrie Emmons is one of those very defective as regards this point; therefore we think Carrie Emmons is not so good as has been represented, and by no means a first class Dahlia.

Then, again, looking at the individual petals of a first-rate flower, they are neither beaked, nor toothed, nor flat, nor reflexed, nor quilled, or funnel shaped, nor cupped, but smooth on the edges, and folded so as to be nearly elliptical in outline. And how admirably this form adapts them for constituting in the aggregate a perfect whole. Better than when quilled, as the spaces between the petals are less, and not so much of the under as the upper surface exposed, while a greater breadth of surface can be taken in at a glance. And better than when flat or reflexed, as the many waving lines, standing out in relief, are richer far than when they are flat or arranged in any other way. Another beautiful feature is the manner in which they are arranged. Beginning with the under petals, which invariably ought to be the largest, they "grow small by degrees, and beautifully less," until the summit is reached, where they should be so dense as to cover the entire disc, and not even a stamen or a scale be seen, and none the worse for leaning a little towards the center. The imbrication should be perfect throughout, and each row of petals of a uniform length.

Of color I do not speak, as it is rather a perplexing subject, and seems to become more and more embarrassing by the giving of new terms—such as Mauve, and Solferino, and Magenta—to colors which, to my poor apprehension, are as old as the ass and the death of Abel. Be that as it may, however, we all derive much pure pleasure from looking upon flowers whose colors are clear, and bright, and dense, no matter of what shade they may be. The Dahlia is no exception in this respect, and the flowers with the richest colors, if otherwise good, will be the most sought after. Among the fancy varieties there are some very striking and fanciful shades. Those are the most beautiful which have a clear ground color, and when the markings contrast well with it, either by lacing the petals, or when laid on in flakes, or in distinct dots.

These remarks may be appropriately concluded by subjoining a descriptive list of a few of the best which have yet found their way into this section of the country. They have been selected with the utmost care from a collection of nearly two hundred varieties, grown the past season by Robert Veitch of this city, and may be regarded as preëminently beautiful. Should any of the readers of the HORTICULTURIST be able to add to these any that are better, or even quite

as good, it might be well for them to do so, as, by so doing, they would confer a favor on some Dahlia growers.

Duke of Roxburgh, orange buff.
Madge Wildfire, deep orange scarlet.
Triomphe de Pecq, deep claret maroon.
Andrew Dodds, very dark purple.
Mrs. Dodds, clear yellow.
Vesta, pure white.
Lilac Queen, clear lilac.
Peri, light blush, shaded with rosy lilac.
Neville Keynes, yellow, laced with reddish purple.
Wallace, rosy lilac.
Emperor, dull red.
King John, pale peach lilac.

FANCY VARIETIES.

Fancy Queen, maroon purple, tipped with white.
Starlight, reddish purple, tipped with clear white.
Fulgens Picta, fiery red, tipped with white.
Harlequin, yellow, distinctly flaked with red.
Queen Mab, drab, tipped with white.
Lord Stanley, lilac, flaked and spotted with dark maroon.

[We are much pleased with Mr. Veitch's remarks. There is so much looseness among us generally in regard to the good points of flowers, that we are glad to see somebody stand up boldly for a critical standard. There are some rules laid down for the form of flowers, which, if worked out literally, would result in a greater degree of stiffness and formality than we should like to see prevalent. An analysis of these rules by persons of cultivated taste and liberal views, would result in checking a tendency this way. Mr. Veitch's remarks are judicious. We think, however, he is mistaken about the footstalk of the Emma Cheney dahlia; or it may be that a change of soil, or a different mode of culture, has shortened it. We have been familiar with it for some three years, and have found no difficulty in seeing the flowers as far off as we could see most others. A footstalk about four inches long can hardly be called sessile. Let us take Pre-eminent, a Dahlia that Mr. Veitch might very well add to his list; this year the footstalk with us has hardly been two inches long; yet it is not usually so, and is by no means characteristic of that fine Dahlia. The cause that operated here may have operated with Mr. Veitch; but we can not think, after what we have seen, that a very short footstalk is characteristic of Emma Cheney. Form is undoubtedly the first point in a good Dahlia. There are two ways in which a good form is manifested; one called the bee-hive and the other the round. They embrace, one

the parabolic and the other the circular curve, and it would be difficult to say which is the most beautiful. We know of no Dahlia that will meet the requirement of holding its first petals to the last. We have never seen one among the thousands that we have grown. There are quite a number that maintain the circular form till the flower is past its prime; but the first petals decay, the next row taking their place. There are some Dahlias, the first petals of which, for want of substance, lose their form when the flower is scarcely half expanded. These are probably the Dahlias Mr. Veitch has in view. We do not believe Carrie Emmons to be one of them, however. We have not seen as much of it as we have of Emma Cheney, and therefore can not speak of its habits so confidently; but Mr. Richardson, at different times, brought us flowers in different stages of development, and in every instance the form was as perfect as any thing we ever saw; in fact, we considered its form a marvel of beauty, Mr. Richardson, in this respect, ranking it among the best of all his Dahlias. How far this perfection of form was due to Mr. Richardson's skill, we can not say; all we know is, the form was there, and Mr. Richardson has no superior among us as a Dahlia grower; at least nobody has yet shown himself so. We have great confidence in Mr. Richardson's judgment and taste; and none the less because he ranks among our best artists, which may be supposed to give him a good knowledge of color and form. Our opinion of the Emma Cheney Dahlia, however, was quite independent of Mr. Richardson's; in fact, we always have an opinion of our own. We do not understand Mr. Veitch as by any means giving an adverse opinion of this Dahlia; he simply points out what he considers an imperfection in its footstalk, which we hope and believe he will find only temporary. We will just say here that nothing would please us better than to have Mr. Richardson and Mr. Veitch discuss the "points" of a good Dahlia. We should look for some valuable information as the result. Mr. Veitch does wisely in avoiding the subject of color, unless he would devote several articles to it. We remember how impatiently we waited for our *mauve* colored Verbena to come into bloom, and what a *pshaw* greeted the event when it did happen. And the Solferino and Magenta colors! These may do very well for Paris milliners at their wits' end, but we hope florists will avoid them. It will be some time before we help to give color to that kind of public opinion. Mr. Veitch's list of Dahlias is a very good one; there are others equally fine that may be added to it. This we leave to some of our readers to do.—Ed.]

GROWING ISABELLA GRAPES.

BY EUCLID.

Mr. Editor,—A hint is as good as a kick, and your "Hints on Grape Culture" have been of great service to me this year. To show you how I have profited under your instructions, I send you a basket of Isabella Grapes, a fair sam-

ple of my whole crop. Without your aid I should never have grown them so large, so fine, so ripe, so delicious. May I be excused for saying that the Isabella Grape *is worthy of cultivation*, and stands next to the Delaware? When I say cultivation, I do not mean neglect. I am told by those who have more knowledge, that my *experiment* (query, is it an experiment? I followed your directions as closely as possible) has succeeded this year because my vines are *young*. The finest grapes of this variety that I ever saw before were grown on a very *old vine*, planted—may be it grew without planting—away back in my infant years, long ago. My mother had her pretty posy bed under the grape vine, which grew up on a trellis, over the well, into a tree, and ripened its berries fifty to a hundred feet from the roots. And such grapes! but Isabella was then *the* grape, and would be now if rightly cultivated.

I have followed your directions, and have ripened the canes in the hopes that I can send you another basket equally as good the next year; for your Hints, if good for any thing—and I think they are—are worth to me a basket of grapes yearly. An old fruit grower who lives near me says that I shall never be able to get as good bunches and ripen them so well again; that when he first began he had fine fruit too; that he dug around his vines, and spent a good deal more time than he can afford to now, for it no longer pays. He can get but two to four cents a pound for his best fruit. Pray tell me, is this so? If he is right, will it not *pay* (that is the *summum bonum* in growing grapes, as well as in all other pursuits) to set out new vines, as we do Strawberries, every year? I think my neighbor's vines have gone to grass in more ways than one. He cuts enough of it to feed his cow, but when the time comes to send his grapes to market he finds them unripe. I heard him inquiring the other day how to make vinegar. He says it is no longer profitable to cultivate them; thinks the climate has changed. Once he could raise as good grapes as any body, but can do so no longer. He thinks the vines have run out. Do you think the digging around my mother's vine had any thing to do with ripening the grapes so far away from the roots? or was it because they got to the sun, and air, and light at the top of the old plum tree, as some of the neighbors believed? My vines are five years planted; three years ago they were cut down by the severe cold weather. I then grew new canes, and this year they fruited. I allowed but two bunches to grow on a shoot, and pinched in as you directed, growing other canes for the next year's fruiting, and have them ready ripened. All my bunches of fruit are equal to those I send you, weighing more, probably, than if all had been allowed to grow. The ground was kept loose and free from weeds, with carrots and potatoes between the rows.

[The box of grapes was duly received, for which please accept our thanks. We were about to compare them with a sample sent by another correspondent to illustrate his principle of growing grapes; but as the comparison would be no comparison at all, and we do not wish to hurt his feelings, we refrain. Suffice it to

say, that your Isabellas were equal to the best we have seen. If generally grown as well, and sent to market in the same ripe condition, the Isabella would be thought more of by the public. Such Isabellas you can always grow by regarding our Hints. What we and others have done for many years by following this treatment, you can do. Now a word about your "old fruit grower." If he has grown *old* in fruit growing only to indulge in such talk, all we have to say is, that he has grown old without knowledge. Old vines, if they have been well grown, *always* produce better fruit than young ones. It is easy to see where your old neighbor failed; as his vines grew old, he was afraid to give them as much care as he probably would any of his ordinary field crops, and they resented the neglect by "*sour* looks," and unyieldingness generally. The vine is generous, especially when young, and we may rely upon one or two fair crops under neglect; but this will not last long, as your neighbor has discovered. We do not know your neighbor, or the condition or position of his vineyard; but we will stake our reputation (and that is very dear to us) upon our ability to make his vines produce fine grapes in from two to three years. There may be local causes why a vineyard should not succeed upon a particular spot; but all excuses based upon change of climate, vines running out, etc., are without reason. There can be little doubt that the frequent stirring of the soil about your mother's vine had much to do with the perfection of the fruit, though other causes may have coöperated with this, a free play of light and air being among them. Our advice to you is, to keep on as you have begun; so shall you be spared the trouble and vexation of planting your grape vines as you do strawberries.—Ed.]

NEWBURGH BAY HORTICULTURAL SOCIETY.

BY THE EDITOR.

We had the satisfaction of being present at the fall exhibition of this thriving young society, held at Newburgh on Wednesday and Thursday, Sept. 24th and 25th. As the edifice in which it was held was a church, it would not be quite proper to say it was not a *good* one; yet we may be permitted to say that it was not half large enough. A building twice the size would have been none too large. The exhibition, as a whole, was creditable to Newburgh, to the Society, and to those concerned in getting it up; yet we shall expect them to do much better next year. The arrangement was about as good as the room would admit of; in some respects, there was manifested decided good taste. The *rules* of the exhibition were in some particulars defective; but such things are incidental to a new society, and in time usually correct themselves. It is much to the credit of the people of Newburgh that they seemed to be conscious of having a beautiful institution in their midst. We hope they will have the good sense to support it generously. For want of room, we can only indulge in a few general remarks.

The display of fruit was large and fine, especially apples, pears, and native grapes. There were fewer samples of foreign grapes than we expected to see in a place like Newburgh. There were samples of native grapes, not meeting in some respects the requirements of the rules, that were quite equal to those that took prizes. The same remark will hold good of other things. Mr. Charles Downing had a fine table of fruit, for exhibition only. There were some fine samples of fruit from Alexander Palmer, A. J. Caywood, James H. Palmer, and others, which the rules would not admit to competition, the exhibitors living outside the county. A plate of Seckel pears from Mr. Jno. Peattie was the best single dish in the room. Mrs. Geo. B. Reeve exhibited some beautiful specimens of the Gravenstein apple, which had been submitted to an interesting process, which left the names of individuals, &c., distinctly and sharply traced. They were the first specimens thus treated that we had seen exhibited. Mrs. Reeve deserves much credit for her success in this beautiful art, which will be described hereafter.

The display of flowers was good; but there might have been twice as many if there had been room for them. An ornamental parlor stand from Miss Denning was exceedingly pretty and unique. It was in the form of a center table, about six inches deep, lined with zinc, and filled with sand, in which the flowers were imbedded. The whole was covered with a glass top. Filled with about 150 varieties of flowers, it was a very beautiful object. Mr. Brinckerhoff had a fine collection of pot plants, embracing Caladiums, Begonias, Marantas, and many other pretty things. Mr. Sargeant also had a collection of rare pot plants. There were other good things in this department. In the arrangement of flowers, Mrs. Charles Downing showed much the best taste. Strait-laced bouquets have little beauty in our eyes.

The vegetable department was abundantly stocked with good specimens. The best thing here, and one of the best things we ever saw, was an ornamental arrangement of vegetables in the form of a cornucopia, by W. L. Findley, Esq. It was most admirably done. We tried to get a photograph of it, but did not succeed.

We have no space for further detail. We are compelled, much to our regret, to omit the list of prizes till next month.

EXHIBITION OF THE BROOKLYN HORTICULTURAL SOCIETY.

BY THE EDITOR.

The fall exhibition, before alluded to, took place at the Academy of Music on the 24th, 25th, and 26th September. Our notice was crowded out last month for want of room. We have heretofore spoken of the fitness of the Academy for a horticultural exhibition. It is by far the best place in Brooklyn. The parquette was floored over as usual, and the stage tastefully decorated with bunting. In

front of the stage was a tank, in which floated majestically the great Victoria lily. This was sent in by Mr. Bearns of East Brooklyn, who has been very successful in growing this stately plant. The display of ornamental leaved plants was a striking feature of the exhibition. No matter how few their number may be, they never fail to arrest the attention. The collection from B. C. Townsend, Esq., was large and magnificent. His collection is probably not excelled by any in the country. A vase of skeletonized plants from Mr. Platt was a beautiful object, the specimens being admirably prepared. The flowers and pot plants were, on the whole, better than has been usual even at these fine exhibitions; but we have no space for much detail. The collection of fruit was large, as was to have been expected after such a season as we have had; but a great deal of it was very fine. The large exhibitors of Apples were Ellwanger & Barry of Rochester, and W. B. Smith of Syracuse. Pears were plentiful, the largest collections being from Ellwanger & Barry, Gabriel Marc, P. T. Quinn, etc. Among grapes, Mr. Fuller led off with some twenty varieties of natives, and Mr. Mace came in, too late for competition, with some very beautiful Delawares. Messrs. Egan, McMillan, and others, showed very fine foreign grapes. This was, in many respects, the Society's best exhibition. The attendance was fair, but how far it was remunerative we can not say. We hope, however, that the results of this exhibition have not been discouraging. We should learn with mortification that there is not in Brooklyn enough true taste and refinement to support a Horticultural Society. The list of prizes is omitted for want of space.

ADDRESS OF PRESIDENT WILDER.

[Continued from p. 536.]

THINNING OF FRUITS.

One lesson which experience has taught us, is the importance of thinning the fruit, especially of apples and pears. This branch of Pomology has received comparatively but little attention. There is a limit to the capabilities of all created things. If you tax the energies of an animal too severely for a long time, the result will be premature age and decay. Subject any vegetable or mineral substance to too great pressure, and you destroy its power of cohesion. So if you permit a tree to bear beyond its strength, you injure its fruit, retard its growth, and shorten its life. All have observed that superfecundity one year produces barrenness the next. Hence we hear among our farmers and gardeners of what they term the bearing year. They invariably designate the Baldwin apple as a tree that bears on alternate years. But is not the cause of this alternation found in the fact, that the abundant crop of the bearing year exhausts the

energies of the tree, and absorbs the pabulum so as not to leave sufficient aliment for the formation of fruit spurs for the succeeding year? Many varieties have a tendency to overbearing, especially those which produce their fruit in clusters. Nature herself teaches us the remedy for this evil, and a superabundance of blossom is generally followed by a profuse falling of the embryo fruit. When and where this dropping is not sufficient to prevent overbearing, we should resort to the process of relieving the tree of a portion of its fruit.

The organism which carries on healthful development, in order to repeat its cycle of functions from year to year, can not be overworked without time for recuperation. Whatever of nutrition goes to the support of useless branches, or a redundancy of fruit, abstracts that strength from the tree which would otherwise be appropriated to the perfection of the crop, and the development of the spurs which would bear fruit the next year. One of the best cultivators in the vicinity of Boston has reduced this theory to practice, with the happiest effect, in the cultivation of the pear. His system allows no useless wood, nor more fruit spurs, and no more fruit, than the tree can properly sustain. As a consequence, he produces every year superior fruit, which commands the highest price. Some have doubted whether this practice can be made remunerative, except in its application to the finer fruits. But another cultivator, who raises an annual crop of the best apples, assures us that the secret of his success is the thinning of the fruit, and he has no doubt of the economy of the practice. No good farmer doubts the necessity of thinning his root crops, no *vigneron* the propriety of thinning his grapes. Analogy of cultivation, therefore, justifies the practice, and I entertain no question of its great importance.

Light, air, and moisture, are essential to the production of vegetable products, and especially of fine fruits. Who has not observed that the best specimens of fruits on a tree are ordinarily those which are most exposed to these elements? Who does not select the full sized ruddy fruit, which has had free communion with light, heat, and air, in preference to the half fed specimen which has shared its own proper nourishment with five or six crowded rivals on the same spur?

An experienced English cultivator says: "The bending of branches of trees by an overcrop of fruit is most injurious, for the pores of the woody stalk are strained on the one side of the bend, and compressed on the other; hence the vessels through which the requisite nourishment flows being partially shut up, the growth of the fruit is retarded in proportion to the straining and compression of the stalk." This is illustrated in the overbearing of some varieties, which, from a redundancy of fruit, without the process of early and thorough thinning, seldom produce good specimens, and in a few years become stinted and unhealthy trees. The overbearing of a tree is as much a tax upon its energies and constitution, as is the exhaustion of a field by excessive crops of the same kind, year after year, without a return of nutritive materials. Inexhaustible fertility is a chimera of the imagination. Sooner or later, the richest soils will require a restoration of what

has been abstracted by vegetation. However fertile at first, the constant over-cropping of the soil is a reduction of the elements on which health and fruitfulness depend. This great principle of sustenance and reciprocal relation runs through the whole mass of life, of mind, and of matter.

"One cry with never ceasing sound,
Circles Creation's ample round."

Intimately connected with this process of thinning, is the time when the work should be executed. It should not be done before we can distinguish the choicest specimens in a cluster of fruit, nor delayed so long as to waste the energies of the tree. This practice, judiciously followed, will supersede the necessity of staying up the branches, will prevent injury to the tree by their breaking, and will prove decidedly economical.

Associated with the thinning of fruits is the expediency of gathering a part of the crop as soon as it approaches maturity. The remaining specimens will thereby be much increased in size and excellence. The fruit of a tree does not all come to maturity at the same time, hence this successional gathering will turn the crop to the highest practical account, and will keep the productive energies of the tree in a healthful and profitable condition.

Does some one say, leave all this to Nature, and not attempt to mend the ways of Providence? But was not man ordained to help Nature, and placed in the garden to dress and keep it? True, God has enacted general laws, but requires us to turn them to the highest practical account. Thus he has given us in fruits and flowers forms of beauty and loveliness, and has assigned to us the duty of bringing them to the greatest possible perfection. It is, too, by a co-operation with Nature, in what we may esteem little things, that the highest achievements in science are reached, and the most valuable results attained. The ocean is but the accumulation of drops, and the mountain is but the rolling up of pebbles. From the slender spire that trembles beneath the weight of the dew drop, to the lofty monarch of the forest, whose hoary branches waved in the breeze a thousand years before the birth of the Christian era, we have signal proof of the law of mutual dependence and support.

Fruit trees will not take care of themselves. Constant vigilance is the price of superior trees or superior fruit. The poet may sing of the

"redundant growth
Of vines and maize, and bower and brake,
Which Nature, kind to sloth,
And scarce solicited by human toil,
Pours from the riches of the teeming soil;"

but the cultivator of fruits must realize the fact, that without care and skill he can not depend on uniform and continued success.

NEW NATIVE VARIETIES.

I have before spoken of the production of new varieties of fruits adapted to our country. But as it is "line upon line, and precept upon precept," that makes a durable impression, let me remind you again that the future success and progress of American Pomology must rest mainly upon the introduction of new kinds raised from the seed upon our own soil. Let me, then, encourage you in your laudable enterprise.

Is there any reason why we can not produce winter varieties of pears of the finest quality, as beautiful and smooth as the favorite Bartlett or Louise Bonne de Jersey? The Beurré Langlier and Glout Morceau, in regard to beauty, are of this class. Why cannot we have, instead of the rough exterior of some of our late sorts, those of fair skins and ruddy colors? And then in regard to flavor, why not be able to produce those of a rich character, like the Seckel, Belle Lucrative, and Passe Colmar? From the seed of the latter many varieties were raised by the late Mons. Esperin, of Malines. Some of these are even superior in saccharine matter and richness to the parent, but unfortunately not well adapted to our climate. Why should not our popular Bartlett be the mother of a race equal in quality and hardier in character? Of the seedlings raised in this vicinity, those on exhibition from Mr. Richardson, of Dorchester, Mass., are striking illustrations of the value of this variety as a parent from which to originate good native sorts. The experiment of the late Mr. Clapp, of Dorchester, in the union of the Bartlett and Flemish Beauty, as is believed, produced the Clapp's Favorite, a pear of equal size and beauty, entirely hardy, and pronounced by the best judges to be superior to the variety first named. The seedlings raised by Mr. Dana, of Roxbury, Mass., are all good. Some of them are superior, and evince a constitution and vigor which adds much to the value of their excellence. When we reflect upon the little effort which has been made to produce native varieties, it is wonderful what progress has been made.

In the production of new sorts we should aim first, at a strong, hardy, robust, vigorous habit, and thus overcome a difficulty which now exists with many of the best fruits, namely, a weak, straggling growth. Others are constitutionally wayward and unhappy in their growth, like Beurré Bosc, so as to render them scarcely obtainable from our nurseries. For instance, instead of trees with the feeble wood of the Winter Nelis, we could have the same fruit from a tree like the Doyenné Boussock, or Buffum, the former of which, in Europe, attains the height of fifty to sixty feet, and here both are scarcely less vigorous or hardy. This is only to be obtained by the choice of parent varieies to breed from, one of which, at least, possesses like vigorous habits.

To be continued.

EDITOR'S TABLE.

To Contributors and others.

Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

THE LAST NUMBER FOR 1862.—The present number is our last issue for the current year. We hope our readers will bear this in mind, and renew their subscriptions at the earliest possible moment, so that we may mature our plans for the coming year. Our club rates present great inducements for getting the HORTICULTURIST at a low price, which should not be overlooked by our old subscribers in renewing their subscriptions. It is just as easy to send on a dozen names as one, and we think a good deal better. Let each old subscriber, therefore, do his best to send us a club. We can promise that each and all shall receive more than the worth of the subscription. These are not the times to dispense with horticultural knowledge and reading. If, in time of peace, we must not forget the arts of war, neither, in time of war, must we forget the arts of peace.

SEEDLING GRAPES.—Among the seedling grapes sent to us was one (not yet noticed,) which may well be singled out for its excellence. The bunch is compact, large, and shouldered; the berry is also of good size, equaling that of the Isabella. In quality it resembles somewhat the Catawba, but is very much sweeter, with a decided vinous flavor. The flesh is juicy, tender, and melting. It has a thin and tender skin. In addition to all this, it is an early grape. The color is a dark claret, with a heavy bloom. Our convictions of its merit are decided; we esteem it above the Catawba. It is so distinct as not to be confounded with any other grape. We have named it after the intelligent amateur who originated it.

REMITTANCES.—Will our subscribers, advertisers, &c., please send us U. S. Postal Currency, on which we will pay the premium, or else send us *new* three cent stamps only for all fractions of a dollar. For other sums, send us U. S. Treasury Notes, or a draft on New York, less the exchange.

FRUIT RECEIVED.—To Mr. Mace, of Newburgh, we are indebted for a box of very fine Delaware grapes. We tried to keep them, but it was no use.—

To some friend at Springfield, Mass., (name unknown,) we are also indebted for very fine Delaware grapes. We wish he would discover himself, so that we might thank him.—From Connecticut we received some very large and beautiful Flemish Beauty Pears; in all respects excellent. The letter accompanying them was mislaid, and we can not recall the name. The hope of doing so has prevented an earlier acknowledgment.—We have also received many samples of grapes and pears from other parties, all of which, we believe, have been acknowledged in other ways, according to request.

Catching a Tartar.—Our printer last month, (p. 516, line 2 from bottom,) caught a Tartar; but a close examination proves that it was only a *taster*. He had probably heard of tartar being used in wine-making, or that Tartars were fond of wine, or something of that kind; but the reader will please make the correction.

The American Pomological Society.—We have received from President Wilder the accompanying circular, to which we give place with the hope that it may aid the Society in hastening the publication of the proceedings of its last session.

"The undersigned, President of the American Pomological Society, congratulates the cultivators of fruit and the public generally upon the gratifying progress which the science of Pomology has made in our country. This advance is mainly to be attributed to the establishment and influence of Horticultural and Pomological Societies. Prominent among these is the American Pomological Society, embracing, as it does, within its organization all the States and Territories of the Union, the Canadas, and the Eastern British Provinces. This Association held its Ninth Session in the city of Boston, during the last month. The attendance was large, embracing nearly two hundred delegates and members, and in which fourteen States and Territories were represented. The contributions of fruit were numerous, and the discussions of a highly interesting character. These, like the former proceedings, are to be published in the Volumes of the Society, and in which will also appear the New Catalogue of Fruits, together with a list of the various States and districts to which they are best adapted.

"All persons who are desirous of obtaining these Transactions, are respectfully solicited to become members of the Society, by forwarding to Thomas P. James, Esq., Treasurer, Philadelphia, or the undersigned, at Boston, the requisite fees. Ten dollars constitute a life and two dollars a biennial Membership. Life members will be furnished, as far as possible, with the back volumes of the Society's Publications.

"Persons desirous of responding to this Circular will please do so immediately, that their names may appear in the forthcoming volume.

"Marshall P. Wilder, President."

Correspondence.

Winnetka, Ill., Nov. 10th, 1862.

P. B. Mead, Esq.,—*Dear Sir*,—I wish to inquire if there is to be found in New York, glass especially designed for a cold grapery; and if not, what kind would you recommend, and of what size for fixed sash?

I design to build a grape house 12 feet by 50, with rafters 10 inches apart;

front sash 3 feet; rear wall 12 feet, with cut off peak with ventilators. Are the above good proportions for a house of that size?

An answer to these queries in the next number of the HORTICULTURIST would greatly oblige one, and perhaps many old subscribers.

[There is glass in New York specially adapted to graperies. We have lately been using double thick glass of American manufacture which is but very little inferior to imported glass. The price is nearly a half less. Glass has advanced 20 per cent. within a few weeks past. The size that we now invariably use for the top is 8 by 10 inches. We do not like the form of your house, unless there be special reasons for it. We prefer a double pitch to a single pitch; besides, the first is cheapest. There is no beauty in a single pitch. 20 by 30 feet would give you the same number of square feet, would look very much better, and require less labor to take care of it. 20 by 50 feet would give you a still better proportioned house. From the floor to the peak should be about 12 feet. The side sashes should be 3 feet 3 inches to accommodate glass most readily bought. The rafters should be 4 feet 4½ inches apart from their centers. On these put two purlins, and on the purlins the sash bars. For the rafters, 2 by 6 inches will be large enough, if of good sound timber. 3 by 8 will be large enough for the sill, and 3 by 6 for the plate. With the above letter came a club of *eight* subscribers for 1863. That is asking questions to some purpose. Please accept our thanks, and—ask more questions.—ED.]

MR. EDITOR:—On the 18th of last April, I planted in a cold house just erected, ten foreign grape vines two years old, grown in pots. The canes were small, and had been cut back to about two feet when received.

I planted them in the inside of the house, according to directions in a former number of the HORTICULTURIST. As an experiment, I cut from the canes remaining, twelve to eighteen inches of each vine, and planted these cuttings along the inner edge of the border, inside of the house, and protected them with a small layer of moss. (I have had no experience in grape growing, either in native or foreign kinds.)

They were all watered regularly twice a week, with tepid rain water on Fridays and with soap suds on Mondays. All the cuttings have taken root, and six of them had each made a growth of a single stock twelve to fifteen feet in length on the 1st day of September, and the other four produced each a cane of six to ten feet long.

The roots planted were cut back to the lower healthy bud, and on the same day had each produced a cane sixteen to twenty-four feet in length.

On the 1st of September, I pinched off the heads of all the vines to aid in ripening the wood, according to your suggestions. The main canes are now full three-fourths of an inch in diameter of well colored and hardened wood; and the cuttings

are three-eighths to five-eighths in diameter, but not yet so well colored and ripened.

I wish your advice about cutting back the principle vines; also the cuttings; at what time, and what length of cane do you recommend?

What shall I do with those produced from the cuttings? If practicable, I design them as an experiment in semi-dwarfing.

Through the centre of my grape house, lengthwise, are two parallel partitions two feet apart in the clear, dividing the grape border on the front side from the border on the back side, which is designed for small fruit trees.

These partitions are also intersected by lateral divisions about three feet apart, forming boxes two by three feet, and two feet deep, down to the top of the foundation stand of the borders. In these boxes I desire to grow these experimental vines, on the long spur system, and main stems not more than six to eight feet high when fully matured. Is my plan practicable? And when shall I plant the vines home in the boxes? must the roots be pruned at planting? The border is already filled in in the boxes of the same material as the main border.

Any suggestions you may make consistent with the best interest of your indispensable HORTICULTURIST will be gladly received by one of your subscribers at least. What shall I do with the half dead Delaware grape vines I purchased last spring of one of the principal nurserymen in New York?

They were two years old, grown in pots. I planted them with care in good ground, well prepared, and they have been as well cared for as my one year's experience would allow. They have produced each a growth of about two feet, a little slender crooked stock. Would you advise rooting them out, or let them remain for another year's anxiety and disappointment? My other native kinds have mostly made a growth of six to ten feet.

Yours truly, SUBSCRIBER.

Orange, N. J., Oct. 14, 1862.

[For a beginner you managed your vines and cuttings very judiciously. You evidently read to *understand*, and your practice consequently meets with corresponding results. We have a right to feel flattered with the knowledge that our suggestions have been followed with such gratifying success. In regard to the pruning of the vines, the strongest should be cut back to about five feet; they might be left longer, but even with the size of your canes, the future of the vine will be most satisfactory by not allowing them to *exceed* this length. These canes may be allowed to produce some fruit next year. The pruning may be done at any time during the early part of December; it will not be too late any time before hard freezing weather. A few words, however, in regard to your proposed experiment in "semi-dwarfing." The vines will do very well along the centre of your house for two or three years, or until the front vines make a dense shade. We advise you to make the experiment. In this case, first prune the young vines to from

one to three feet, according to the stoutness of the canes. Take a forked spade, and begin some three or four feet from the vines, to find the ends of the roots; then follow them up very carefully, letting as much earth as possible adhere to the fibres. As the roots are exposed, cover them with a piece of matting that has been wetted, to prevent them from getting dry. After the young vine has been lifted in this careful manner, carry it just as carefully to the box in which it is proposed to plant it. Spread the roots out nicely and evenly, and peg them down, if necessary, first cutting off the ends of the long primary roots, or bending them in a circular form. Next take some fine sandy soil, (without manure,) and sprinkle all over and around the roots till they are covered about an inch; and then with a watering pot with a fine rose throw on just enough water to cause the earth to settle around and under all the roots. If any portion of the roots become exposed, they must be covered in the same way; but no more water must be used than is really necessary to accomplish this purpose. Now throw on two inches more of fine soil, and on the top of this may be put your compost, which will be all the better for having a good proportion of fine muck in it. The soil must be pressed gently, not packed. By taking this trouble you may reasonably look for some fruit on such stout young vines as you have described. We should like nothing better than to help you in this operation. If your cuttings had been grown in pots instead of the border, they could have been turned into the boxes without disturbing the roots, and the results would have been more certain. If you are not successful in lifting the young vines, your proper course will be to cut them down to three eyes, and grow a single cane, waiting another year for fruit. The planting should be done at once, and the roots protected by a covering of manure; but some soil must be put around the cane to prevent the manure from coming in immediate contact with it. A good way is to cover the canes with a few inches of earth before applying the manure. You had better replace your Delaware, provided you get a *good* one; otherwise cut the present one down to a couple of eyes. It will probably give you a good cane next season. We hope the above necessarily brief directions will be of some service to you. They were intended to appear last month.—Ed.]